



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,768	07/21/2003	Koji Sakai	4041K-000140	4834
27572	7590	04/07/2004	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			JIMENEZ, MARC QUEMUEL	
			ART UNIT	PAPER NUMBER
			3726	

DATE MAILED: 04/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/623,768	SAKAI ET AL.
	Examiner	Art Unit
	Marc Jimenez	3726

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) Claim(s) ____ is/are allowed.
- 6) Claim(s) 1-14 is/are rejected.
- 7) Claim(s) ____ is/are objected to.
- 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 21 July 2003 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/4/04.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: ____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. **Claims 1-14** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites “an appropriate portion” in line 4 which is vague and indefinite. It is unclear what an “appropriate” portion would be.

Claim 1 recites “it” in line 11. It is unclear which element is being referred to.

Claim 1 recites “a pipe fluctuation absorbing portion” which is vague and indefinite in lines 12-13. It is unclear how a pipe could have a “fluctuation” portion.

Claim 1 recites “relief space” in line 13 which is vague and indefinite. It is unclear how a pipe could have “relief”.

Claim 2 recites “the relief space” in line 6 which lacks proper antecedent basis.

Claim 2 recites “an appropriate portion” in the last line which is vague and indefinite.

It is unclear how a pipe could have a “fluctuation” portion.

Claim 4 recites “on the basis of the end face” in the second to last line which is unclear.

Claim 5 recites “on the basis of the end face” in the last two lines which is unclear.

Claim 5 recites “an appropriate portion” in line 6 which is unclear.

Claim 9 recites “the simple connector” in lines 5-6 which lacks proper antecedent basis.

Claim 10 recites “when a sleeve provided on an outer circumferential portion of the diameter expanding tool” in lines 2-4. It is unclear whether the sleeve is part of the invention or not. There is no positive recitation that the sleeve is part of the invention.

Claim 10 recites “is moved differently” in line 4 which is vague and indefinite.

Claim 10 recites “after the diameter expanding portion is machined” in the last line. It is unclear what this limitation encompasses.

Claim 12 recites “a common connector at least one of the end portions of the plurality of pipes” which appears to be an incomplete limitation.

Claim 13 recites “instead of the connector connected with the diameter expanding portion of the end portion of the pipe, a female type jig capable of being split having a through-hole, the inner face of which is expanded, is used” which renders the scope of the claims unclear. It is unclear whether the connector is part of the invention or not.

Claim 14 recites “an appropriate portion” in line 4 which is vague and indefinite. It is unclear what an “appropriate” portion would be.

The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claims 1, 6-8, 12, and 14** are rejected under 35 U.S.C. 102(b) as being anticipated by Inoue Seiji (JP 07-269987).

Seiji teaches a method of manufacturing piping having a joining portion in which a diameter expanding portion 7 is formed at an end portion of a pipe 22, comprising the steps of: fixing the pipe 22 by clamping an appropriate portion of the pipe with a pipe chuck 28 or 6 for adjusting the pipe length simultaneously when the expanding diameter portion 7 is formed; engaging a connector 21 having a through-hole 26, the inner diameter of which is expanded 7, with an end portion of the pipe 22; and caulking an end portion of the pipe with a diameter expanding tool 27 so as to expand the diameter of the pipe 22 end portion and caulk it to an inner face 7 of the connector 21, wherein, as a pipe fluctuation absorbing portion 7A (see the various shoulders formed in the increased diameter face 7 of the connector 21), which is a relief space of the pipe material, is previously formed in a portion on the inner face of the connector 21, when a plastic deformation is given to the pipe end portion by the diameter expanding tool 27 so as to form a diameter expanding portion, an excess pipe material is absorbed by the pipe fluctuation

Art Unit: 3726

absorbing portion **7A** and the pipe length is reduced and automatically adjusted to a predetermined length.

Regarding claims 6-8, the pipe fluctuation absorbing portion formed inside the connector **21** is formed in a gap between the inner face of the through hole of the connector **21** and the surface of the diameter expanding tool **26** (see fig. 5 which shows the gap). Note that there are different shoulders in the surface **7A** which correspond to intermediate and end portions of the pipe.

Regarding claim 12, a plurality of pipes **22,31** are connected with a common connector **21**.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 2-5** are rejected under 35 U.S.C. 103(a) as being unpatentable over Seiji in view of Takikawa et al. (5,090,611).

Seiji teaches reducing the length of the pipe **22** by forming an annular protruding portion **24** on an outer circumference of the pipe **22** when a portion of the pipe material is pushed out by buckling the pipe when one of the pipe end portions **24** is given a stroke by a punch used for sizing.

However, Seiji does not teach the particulars of forming the annular protruding portion including pushing the pipe material into a relief space previously formed on the end face of a pipe chuck after clamping an appropriate portion of the pipe by the pipe chuck.

Takikawa et al. teach forming the annular protruding portion **36** including pushing the pipe material **10** into a relief space **22** previously formed on the end face of a pipe chuck **21** after clamping an appropriate portion of the pipe **10** by the pipe chuck **21**.

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Seiji with forming the annular protruding portion including pushing the pipe material into a relief space previously formed on the end face of a pipe chuck after clamping an appropriate portion of the pipe by the pipe chuck, in light of the teachings of Takikawa et al., in order to symmetrically form the annular protruding portion.

Regarding claim 3, Seiji teaches that a quantity of reduction of the pipe length is increased when a radius of the protruding portion **24**.

Regarding claim 4, Takikawa et al. teach that the height of the relief space **22** formed on the basis of the end face of the pipe chuck is maintained constant. Regarding claim 5, Takikawa et al. teach an end portion of a pipe has been fixed at a predetermined position by a jig **25**, an appropriate portion of the pipe is clamped and fixed by the pipe chuck **21**, and the length of the pipe **10** is adjusted on the basis of an end face **22** of the pipe chuck **21**.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Seiji with the a constant height relief space, fixing an end portion of the pipe by a jig, clamping the pipe by the chuck, and adjusting the length of the pipe on the basis of the end face, in light of the teachings of Takikawa et al., in order to

Art Unit: 3726

symmetrically form the annular protruding portion and simultaneously adjust the length of the pipe.

8. **Claim 9** is rejected under 35 U.S.C. 103(a) as being unpatentable over Seiji in view of Applicant's Admitted Prior Art [AAPA] (fig. 19-20 of applicant's specification).

Seiji teaches the invention cited with the exception of having a simple connector caulked to the other end of the pipe.

[AAPA] teaches that it is known to attach a simple connector **88** to the other end of the pipe.

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Seiji with a simple connector at the other end of the pipe, in light of the teachings of [AAPA], in order to maintain the desired distance between the ends of the pipe. Official notice is taken that it was well known to a person of ordinary skill in the art, at the time of the invention, to have caulked the ends of the pipe to the simple connector, in order to securely fasten the pipe to the simple connector.

9. **Claims 10 and 11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Seiji in view of Caudill (4,980,961).

Seiji teaches the invention cited with the exception of having a sleeve provided on an outer circumferential portion of the diameter expanding tool which is moved differently from the diameter expanding tool, the connector is held before and after the diameter expanding portion is machined.

Caudill teaches a sleeve **40** provided on an outer circumferential portion of the diameter expanding tool **44** which is moved differently from the diameter expanding tool **44**, the connector **36** is held before and after the diameter expanding portion **34** is machined. Caudill teaches that a portion of the pipe **34** is crushed by a portion of the end face of the sleeve **40**.

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Seiji with a sleeve provided on an outer circumferential portion of the diameter expanding tool which is moved differently from the diameter expanding tool, the connector is held before and after the diameter expanding portion is machined and crushing a portion of the end face of the sleeve, in light of the teachings of Caudill, in order to securely hold the connector in place during the expanding operation.

10. **Claim 13** is rejected under 35 U.S.C. 103(a) as being unpatentable over Seiji.

Seiji teaches the invention cited with the exception of having a split type jig.

At the time of the invention, it would have been an obvious matter of design choice to a person of ordinary skill in the art, to have used a split type jig because applicant has not disclosed that using a split type jig provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with either the connector taught by Seiji and as claimed in claim 1 or the claimed split type jig because either forming steps perform the same function of creating an expanded diameter portion equally well. Furthermore, official notice is taken that it was well known to a person of ordinary skill in the art, at the time of the invention, to have used a split type jig in order to create a symmetrical expanded portion at the pipe end.

Art Unit: 3726

Contact Information

11. Telephone inquiries regarding the status of applications or other general questions, by persons entitled to the information, should be directed to the group clerical personnel. In as much as the official records and applications are located in the clerical section of the examining groups, the clerical personnel can readily provide status information. M.P.E.P. 203.08. The Group clerical receptionist number is (703) 308-1148.

If in receiving this Office Action it is apparent to applicant that certain documents are missing, e.g., copies of references cited, form PTO-1449, form PTO-892, etc., requests for copies of such papers or other general questions should be directed to Tech Center 3700 Customer Service at (703) 306-5648, or fax (703) 872-9301 or by email to

CustomerService3700@uspto.gov.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Jimenez whose telephone number is **703-306-5965**. The examiner can normally be reached on **Monday-Friday, between 5:30 am- 2:00 pm.**

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 703-308-1789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306 for regular communications and After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.

Other helpful telephone numbers are listed for applicant's benefit.

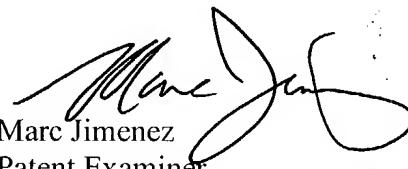
Allowed Files & Publication (703) 308-6789 or (888) 786-0101

Art Unit: 3726

Assignment Branch	(703) 308-9723
Certificates of Correction	(703) 305-8309
Drawing Corrections/Draftsman	(703) 305-8404/8335
Petitions/Special Programs	(703) 305-9285
Terminal Disclaimers	(703) 305-8408
PCT Help Desk	(703) 305-3257

If the information desired is not provided above, or a number has been changed, please call the general information help line below.

Information Help line 1-800-786-9199
Internet PTO-Home Page <http://www.uspto.gov/>



Marc Jimenez
Patent Examiner
AU 3726

MJ
April 2, 2004